

CLAIMS

1. A method comprising:

receiving a broadband signal at a receiver in accordance with a first modulation
5 technique;

tuning the receiver to a channel within the broadband signal;

modifying one or more operational parameters of the receiver to demodulate the channel
in accordance with a second modulation technique to determine whether the channel is a data
channel.

10 2. A method according to claim 1, wherein the broadband signal is a quadrature amplitude
modulated (QAM) cable television signal.

3. A method according to claim 1, wherein modifying one or more operational parameters in
the receiver comprises:
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adjusting a demodulator associated with the first modulation technique to demodulate the
received channel in accordance with a second modulation technique;

sweeping a carrier frequency through a loop bandwidth of the channel to until carrier
frequency lock is achieved; and

20 determining that the channel is an active data channel if carrier frequency lock is
achieved.

4. A method according to claim 3, wherein determining that the channel is an active data
channel comprises:

analyzing channel header information of the signal to identify a multimedia programming identifier, wherein the absence of such an identifier is indicative of a data channel.

5. A method according to claim 3, further comprising:

5 tuning the receiver to another channel if carrier lock is not achieved through the loop bandwidth of the channel; and

repeating the adjusting, sweeping, determining and tuning steps until carrier frequency lock is achieved within the loop bandwidth of one of the channels within the broadband spectrum identifying an active data channel within the broadband spectrum.

10 6. A method according to claim 5, further comprising:

modifying the demodulator to demodulate the identified channel in accordance with the first modulation technique.

15 7. A method according to claim 6, further comprising:

updating receiver operating information to denote the identified active data channel.

8. A method according to claim 3, wherein the second modulation technique is a quadrature phase shift-keying (QPSK) modulation technique.

20 9. A method according to claim 8, wherein adjusting the demodulator comprises:

setting a quadrature amplitude modulation (QAM) demodulator of the receiver to demodulate the channel using a quadrature phase shift-keying (QPSK) technique.

25 10. A method according to claim 1, further comprising:

sweeping a carrier frequency through a loop bandwidth of the channel to until carrier frequency lock is achieved; and

determining that the channel is an active data channel if carrier frequency lock is achieved.

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11. A method according to claim 10, wherein determining that the channel is an active data channel comprises:

analyzing channel header information of the signal to determine payload content.

10 12. A method according to claim 11, wherein analyzing channel header information comprises:

locating a programming identification (PID) field; and

determining whether the PID field contains a multimedia programming identifier to denote that the channel is a multimedia channel.

15 13. A method according to claim 12, further comprising:

identifying the channel as a data channel if the PID field does not contain a multimedia programming identifier.

20 14. A machine accessible storage medium comprising a plurality of executable instructions which, when executed by an accessing machine, implement a method according to claim 1.

25 15. A machine accessible storage medium comprising a plurality of executable instructions which, when executed by an accessing machine, cause the machine to implement a channel detection agent to modify at least the demodulation technique of a broadband receiver to identify

digital channels in a broadband signal, and to analyze at least a subset of header information of identified digital channels to distinguish digital data channels from digital media channels.

16. A machine accessible storage medium according to claim 15, wherein the instructions to
5 implement the data channel detection agent cause the machine to,

tune a broadband receiver to a channel within the received broadband signal, the broadband signal modulated in accordance with a first modulation technique; and

modify one or more operational parameters of the receiver to demodulate the channel in accordance with a second modulation technique to determine whether the channel is a data
10 channel.

17. A machine accessible storage medium according to claim 16, further comprising instructions to:

sweep a carrier frequency through a loop bandwidth of the channel demodulated in accordance with the second modulation technique until carrier frequency lock is achieved; and
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determining that the channel is an active data channel if carrier frequency lock is achieved.

18. A machine accessible storage medium according to claim 17, further comprising
20 instructions to:

analyze channel header information of the demodulated signal to identify a multimedia programming identifier, wherein the absence of such an identifier is indicative of a data channel.

19. A machine accessible storage medium according to claim 17, further comprising
25 instructions to:

tune the receiver to another channel if carrier lock is not achieved through the loop bandwidth of the channel; and

repeat the, sweeping, determining and tuning until carrier frequency lock is achieved within the loop bandwidth of one of the channels within the broadband spectrum and an active data channel is identified.

20. A machine accessible storage medium according to claim 15, wherein the first modulation technique is a quadrature amplitude modulation (QAM) technique.

21. A machine accessible storage medium according to claim 15, wherein the instructions implementing the channel detection agent, when invoked, cause a quadrature amplitude modulation (QAM) receiver to demodulate a received signal in accordance with a quadrature phase shift-keying (QPSK) demodulation technique.

22. A computing device comprising:
a storage medium comprising a plurality of executable instructions; and
a control unit, coupled to the storage medium, to selectively execute at least a subset of the plurality of instructions to implement a data channel detection agent to modify at least a demodulation technique of an accessible broadband receiver to enable the agent to identify digital channels in a broadband signal, and to analyze at least a subset of header information of identified digital channels to distinguish digital data channels from digital media channels.

23. A computing device according to claim 22, wherein the data channel detection agent interacts with the broadband receiver to:

tune the broadband receiver to a channel within the received broadband signal, the broadband signal modulated in accordance with a first modulation technique; and

modify one or more operational parameters of the receiver to demodulate the channel in accordance with a second modulation technique to determine whether the channel is a digitally modulated channel.

24. A computing device according to claim 23, the data channel detection agent further comprising instructions which, when issued to the receiver, cause the receiver to sweep a carrier frequency through a loop bandwidth of the channel demodulated in accordance with the second modulation technique until carrier frequency lock is achieved, wherein the channel detection agent determines that the channel is a digitally modulated channel if carrier frequency lock is achieved.

25. A computing device according to claim 24, wherein the channel detection agent analyzes channel header information of the demodulated signal to identify a multimedia programming identifier, wherein the absence of such an identifier is indicative of a data channel.

26. A computing device according to claim 25, wherein the channel detection agent tunes the receiver to another channel to identify a data channel if carrier lock is not achieved through the loop bandwidth of the channel.

27. A computing device according to claim 22, wherein the channel detection agent issues instructions to modify a quadrature amplitude modulation (QAM) receiver to demodulate a received signal in accordance with a quadrature phase shift-keying (QPSK) demodulation technique.

28. A computing device according to claim 22, wherein the computing device is a cable modem.

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